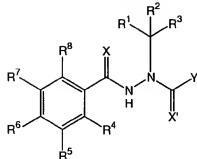


1. (Original) A compound of the general formula:



wherein X and X' are independently O or S;

Y is:

- (a) substituted or unsubstituted phenyl wherein the substituents are independently 1-5 H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, (C<sub>2</sub>-C<sub>4</sub>)alkenyl, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, hydroxy, amino, cyano, or nitro; or
- (b) substituted or unsubstituted 2-pyridyl, 3-pyridyl, or 4-pyridyl, wherein the substituents are independently 1-4 H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, (C<sub>2</sub>-C<sub>4</sub>)alkenyl, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, hydroxy, amino, cyano, or nitro;

R<sup>1</sup> and R<sup>2</sup> are independently: H; cyano; cyano-substituted or unsubstituted (C<sub>1</sub>-C<sub>7</sub>) branched or straight-chain alkyl; cyano-substituted or unsubstituted (C<sub>2</sub>-C<sub>7</sub>) branched or straight-chain alkenyl; cyano-substituted or unsubstituted (C<sub>3</sub>-C<sub>7</sub>) branched or straight-chain alkenylalkyl; or together the valences of R<sup>1</sup> and R<sup>2</sup> form a (C<sub>1</sub>-C<sub>7</sub>) cyano-substituted or unsubstituted alkylidene group (R<sup>1</sup>R<sup>2</sup>C=) wherein the sum of non-substituent carbons in R<sup>1</sup> and R<sup>2</sup> is 0-6;

R<sup>3</sup> is H, methyl, ethyl, n-propyl, isopropyl, or cyano;

R<sup>4</sup>, R<sup>7</sup>, and R<sup>8</sup> are independently: H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, (C<sub>2</sub>-C<sub>4</sub>)alkenyl, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, hydroxy, amino, cyano, or nitro; and

R<sup>5</sup> and R<sup>6</sup> are independently: H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>2</sub>-C<sub>4</sub>)alkenyl, (C<sub>3</sub>-C<sub>4</sub>) alkenylalkyl, halo (F, Cl, Br, I), C<sub>1</sub>-C<sub>4</sub> haloalkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, hydroxy, amino, cyano, nitro, or together as a linkage of the type (-OCHR<sup>9</sup>CHR<sup>10</sup>O-) form a ring with the phenyl carbons to which they are attached; wherein R<sup>9</sup> and R<sup>10</sup> are independently: H, halo, (C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>2</sub>-C<sub>3</sub>)alkenyl, (C<sub>1</sub>-C<sub>3</sub>)alkoxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, benzoyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, halo(C<sub>1</sub>-C<sub>3</sub>)alkyl, formyl, formyl(C<sub>1</sub>-C<sub>3</sub>)alkyl, cyano, cyano(C<sub>1</sub>-

C<sub>3</sub>)alkyl, carboxy, carboxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkoxycarbonyl(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkylcarbonyl(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkanoyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, amino(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkylamino(C<sub>1</sub>-C<sub>3</sub>)alkyl (-CH<sub>2</sub>)<sub>n</sub>R<sup>e</sup>R<sup>d</sup>), oximo (-CH=NOH), oximo(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkoximo (-C=NOR<sup>e</sup>), alkoximo(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)carboxamido (-C(O)NR<sup>e</sup>R<sup>d</sup>), (C<sub>1</sub>-C<sub>3</sub>)carboxamido(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)semicarbazido (-C=NNHC(O)NR<sup>e</sup>R<sup>d</sup>), semicarbazido(C<sub>1</sub>-C<sub>3</sub>)alkyl, aminocarbonyloxy (-OC(O)NHR<sup>e</sup>), aminocarbonyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, pentafluorophenyloxy, pentafluorophenyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, p-toluenesulfonyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, arylsulfonyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)thio(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkylsulfoxido(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkylsulfonyl(C<sub>1</sub>-C<sub>3</sub>)alkyl, or (C<sub>1</sub>-C<sub>3</sub>)trisubstituted-siloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl (-CH<sub>2</sub>)<sub>n</sub>SiOR<sup>e</sup>R<sup>d</sup>R<sup>f</sup>); wherein n=1-3, R<sup>e</sup> and R<sup>d</sup> represent straight or branched hydrocarbon chains of the indicated length, R<sup>e</sup>, R<sup>d</sup> represent H or straight or branched hydrocarbon chains of the indicated length, R<sup>f</sup> represents (C<sub>1</sub>-C<sub>3</sub>)alkyl or aryl optionally substituted with halo or (C<sub>1</sub>-C<sub>3</sub>)alkyl, and R<sup>e</sup>, R<sup>d</sup>, R<sup>e</sup>, R<sup>d</sup>, and R<sup>f</sup> are independent of one another;

provided that

- i when R<sup>9</sup> and R<sup>10</sup> are both H, or
- ii when either R<sup>9</sup> or R<sup>10</sup> are halo, (C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkoxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, or benzoyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, or
- iii when R<sup>5</sup> and R<sup>6</sup> do not together form a linkage of the type (-OCHR<sup>9</sup>CHR<sup>10</sup>O-),

then the number of carbon atoms, excluding those of cyano substitution, for either or both of groups R<sup>1</sup> or R<sup>2</sup> is greater than 4, and the number of carbon atoms, excluding those of cyano substitution, for the sum of groups R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> is 10, 11, or 12.

2. (original) The compound of claim 1, wherein:

X and X' are O;

Y is:

- (a) substituted or unsubstituted phenyl wherein the substituents are independently 1-5 H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, cyano, or nitro; or
- (b) substituted or unsubstituted 2-pyridyl, 3-pyridyl, or 4-pyridyl, wherein the substituents are independently 1-4 H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, cyano, or nitro;

R<sup>1</sup> and R<sup>2</sup> are independently: H; cyano; cyano-substituted or unsubstituted (C<sub>1</sub>-C<sub>7</sub>) branched or straight-chain alkyl; cyano-substituted or unsubstituted (C<sub>2</sub>-C<sub>7</sub>) branched or straight-chain alkenyl;

cyano-substituted or unsubstituted (C<sub>3</sub>-C<sub>7</sub>) branched or straight-chain alkenylalkyl; or together the valences of R<sup>1</sup> and R<sup>2</sup> form a (C<sub>1</sub>-C<sub>7</sub>) cyano-substituted or unsubstituted alkylidene group (R<sup>1</sup>R<sup>2</sup>C=) wherein the sum of non-substituent carbons in R<sup>3</sup> and R<sup>5</sup> is 0-6;

R<sup>3</sup> is H, methyl, ethyl, or cyano;

R<sup>4</sup>, R<sup>7</sup>, and R<sup>8</sup> are independently: H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, cyano, or nitro; and

R<sup>5</sup> and R<sup>6</sup> are independently: H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, halo (F, Cl, Br, I), C<sub>1</sub>-C<sub>4</sub> haloalkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, hydroxy, amino, cyano, nitro, or together as a linkage of the type (-OCHR<sup>9</sup>CHR<sup>10</sup>O-) form a ring with the phenyl carbons to which they are attached; wherein R<sup>9</sup> or R<sup>10</sup> is H, and the alternate R<sup>9</sup> or R<sup>10</sup> is: H, halo(C<sub>1</sub>-C<sub>3</sub>)alkyl, formyl, formyl(C<sub>1</sub>-C<sub>3</sub>)alkyl, cyano, cyano(C<sub>1</sub>-C<sub>3</sub>)alkyl, carboxy, carboxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, amino(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkylamino(C<sub>1</sub>-C<sub>3</sub>)alkyl (-CH<sub>2</sub>)<sub>n</sub>R<sup>5</sup>R<sup>6</sup>, oximo (-CH=NOH), oximo(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkoximo (-C=NOR<sup>6</sup>), alkoximo(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)carboxamido (-C(O)NR<sup>4</sup>R<sup>1</sup>), (C<sub>1</sub>-C<sub>3</sub>)carboxamido(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)semicarbazido (-C=NNHC(O)NR<sup>4</sup>R<sup>1</sup>), semicarbazido(C<sub>1</sub>-C<sub>3</sub>)alkyl, aminocarbonyloxy (-OC(O)NHR<sup>6</sup>), aminocarbonyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, pentafluorophenyloxy, pentafluorophenyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, p-toluenesulfonyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, arylsulfonyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)thio(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkylsulfoxido(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkylsulfonyl(C<sub>1</sub>-C<sub>3</sub>)alkyl, or (C<sub>1</sub>-C<sub>3</sub>)trisubstituted-siloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl (-CH<sub>2</sub>)<sub>n</sub>SiOR<sup>2</sup>R<sup>5</sup>R<sup>6</sup>); wherein n=1-3, R<sup>5</sup> and R<sup>6</sup> represent straight or branched hydrocarbon chains of the indicated length, R<sup>5</sup>, R<sup>6</sup> represent H or straight or branched hydrocarbon chains of the indicated length, R<sup>5</sup> represents (C<sub>1</sub>-C<sub>3</sub>)alkyl or aryl optionally substituted with halo or (C<sub>1</sub>-C<sub>3</sub>)alkyl, and R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup>, and R<sup>9</sup> are independent of one another;

provided that

- i when R<sup>9</sup> and R<sup>10</sup> are both H, or
- ii when R<sup>5</sup> and R<sup>6</sup> do not together form a linkage of the type (-OCHR<sup>9</sup>CHR<sup>10</sup>O-),

then the number of carbon atoms, excluding those of cyano substitution, for either or both of groups R<sup>1</sup> or R<sup>2</sup> is greater than 4, and the number of carbon atoms, excluding those of cyano substitution, for the sum of groups R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> is 10, 11, or 12.

3. (original) The compound of claim 2:

X and X' are O;

Y is:

- (a) substituted or unsubstituted phenyl wherein the substituents are independently 1-5 H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, cyano, or nitro; or
- (b) substituted or unsubstituted 2-pyridyl, 3-pyridyl, or 4-pyridyl, wherein the substituents are independently 1-4 H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, cyano, or nitro;

R<sup>1</sup> and R<sup>2</sup> are independently: H; cyano; cyano-substituted or unsubstituted (C<sub>1</sub>-C<sub>7</sub>) branched or straight-chain alkyl; cyano-substituted or unsubstituted (C<sub>2</sub>-C<sub>7</sub>) branched or straight-chain alkenyl; cyano-substituted or unsubstituted (C<sub>3</sub>-C<sub>7</sub>) branched or straight-chain alkenylalkyl; or together the valences of R<sup>1</sup> and R<sup>2</sup> form a (C<sub>1</sub>-C<sub>7</sub>) cyano-substituted or unsubstituted alkylidene group (R<sup>a</sup>R<sup>b</sup>C=) wherein the sum of non-substituent carbons in R<sup>a</sup> and R<sup>b</sup> is 0-6;

R<sup>3</sup> is H, methyl, ethyl, or cyano;

R<sup>4</sup>, R<sup>7</sup>, and R<sup>8</sup> are independently: H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, cyano, or nitro; and

R<sup>5</sup> and R<sup>6</sup> are independently: H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, halo (F, Cl, Br, I), C<sub>1</sub>-C<sub>4</sub> haloalkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, hydroxy, amino, cyano, nitro, or together as a linkage of the type (-OCHR<sup>9</sup>CHR<sup>10</sup>O-) form a ring with the phenyl carbons to which they are attached; wherein R<sup>9</sup> or R<sup>10</sup> is H, and the alternate R<sup>9</sup> or R<sup>10</sup> is: H, halo(C<sub>1</sub>-C<sub>3</sub>)alkyl, formyl, formyl(C<sub>1</sub>-C<sub>3</sub>)alkyl, cyano, cyano(C<sub>1</sub>-C<sub>3</sub>)alkyl, carboxy, carboxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, amino(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkylamino(C<sub>1</sub>-C<sub>3</sub>)alkyl -(CH<sub>2</sub>)<sub>n</sub>R<sup>a</sup>R<sup>b</sup>), oximo (-CH=NOH), oximo(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkoximo (-C=NOR<sup>d</sup>), alkoximo(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)carboxamido (-C(O)NR<sup>a</sup>R<sup>b</sup>), (C<sub>1</sub>-C<sub>3</sub>)carboxamido(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)semicarbazido (-C=NNHC(O)NR<sup>a</sup>R<sup>b</sup>), semicarbazido(C<sub>1</sub>-C<sub>3</sub>)alkyl, aminocarbonyloxy (-OC(O)NHR<sup>e</sup>), aminocarbonyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, pentafluorophenylloxycarbonyl, pentafluorophenylloxycarbonyl(C<sub>1</sub>-C<sub>3</sub>)alkyl, p-toluenesulfonyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, arylsulfonyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)thio(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkylsulfoxido(C<sub>1</sub>-C<sub>3</sub>)alkyl, (C<sub>1</sub>-C<sub>3</sub>)alkylsulfonyl(C<sub>1</sub>-C<sub>3</sub>)alkyl, or (C<sub>1</sub>-C<sub>3</sub>)trisubstituted-siloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl -(CH<sub>2</sub>)<sub>n</sub>SiOR<sup>a</sup>R<sup>b</sup>R<sup>c</sup>); wherein n=1-3, R<sup>a</sup> and R<sup>d</sup> represent straight or branched hydrocarbon chains of the indicated length, R<sup>e</sup>, R<sup>f</sup> represent H or straight or branched hydrocarbon chains of the indicated length, R<sup>g</sup> represents (C<sub>1</sub>-C<sub>3</sub>)alkyl or aryl optionally substituted with halo or (C<sub>1</sub>-C<sub>3</sub>)alkyl, and R<sup>e</sup>, R<sup>f</sup>, R<sup>g</sup>, R<sup>h</sup>, and R<sup>i</sup> are independent of one another;

provided that

- i when R<sup>9</sup> and R<sup>10</sup> are both H, or
- ii when R<sup>5</sup> and R<sup>6</sup> do not together form a linkage of the type (-OCHR<sup>9</sup>CHR<sup>10</sup>O-),

then the number of carbon atoms, excluding those of cyano substitution, for either or both of groups R<sup>1</sup> or R<sup>2</sup> is greater than 4, and the number of carbon atoms, excluding those of cyano substitution, for the sum of groups R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> is 10, 11, or 12; and

when R<sup>5</sup> and R<sup>6</sup> together as a linkage of the type (-OCHR<sup>9</sup>CHR<sup>10</sup>O-) form a ring with the phenyl carbons to which they are attached, and R<sup>9</sup> and R<sup>10</sup> are not both H,

then R<sup>1</sup> and R<sup>2</sup> are (C<sub>1</sub>-C<sub>4</sub>) straight or branched alkyl, and R<sup>3</sup> is H or methyl.

4. (original) The compound of claim 3:

X and X<sup>\*</sup> are O;

Y is:

- (a) substituted or unsubstituted phenyl wherein the substituents are independently 1-5 H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl; or
- (b) substituted or unsubstituted 3-pyridyl, wherein the substituents are independently 1-4 H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl;

R<sup>1</sup> and R<sup>2</sup> are independently: H; cyano; cyano-substituted or unsubstituted (C<sub>1</sub>-C<sub>7</sub>) branched or straight-chain alkyl; cyano-substituted or unsubstituted (C<sub>2</sub>-C<sub>7</sub>) branched or straight-chain alkenyl; cyano-substituted or unsubstituted (C<sub>3</sub>-C<sub>7</sub>) branched or straight-chain alkenylalkyl; or together the valences of R<sup>1</sup> and R<sup>2</sup> form a (C<sub>1</sub>-C<sub>7</sub>) cyano-substituted or unsubstituted alkylidene group (R<sup>1</sup>R<sup>2</sup>C=) wherein the sum of non-substituent carbons in R<sup>1</sup> and R<sup>2</sup> is 0-3;

R<sup>3</sup> is methyl;

R<sup>4</sup>, R<sup>7</sup>, and R<sup>8</sup> are independently selected from: H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, halo (F, Cl, Br, I), (C<sub>1</sub>-C<sub>4</sub>)haloalkyl; and

R<sup>5</sup> and R<sup>6</sup> are independently: H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, halo (F, Cl, Br, I), C<sub>1</sub>-C<sub>4</sub> haloalkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, or together as a linkage of the type (-OCHR<sup>9</sup>CHR<sup>10</sup>O-) form a ring with the phenyl carbons to which they are attached; wherein R<sup>9</sup> or R<sup>10</sup> is H, and the alternate R<sup>9</sup> or R<sup>10</sup> is: H, halo(C<sub>1</sub>-C<sub>2</sub>)alkyl, formyl, cyano(C<sub>1</sub>-C<sub>2</sub>)alkyl, carboxy, amino(C<sub>1</sub>-C<sub>2</sub>)alkyl, oximo (-CH=NOH), (C<sub>1</sub>-C<sub>3</sub>)carboxamido (-C(O)NR<sup>7</sup>R<sup>8</sup>), (C<sub>1</sub>-C<sub>2</sub>)semicarbazido (-C=NNHC(O)NR<sup>7</sup>R<sup>8</sup>), aminocarbonyloxy (-OC(O)NHR<sup>8</sup>), pentafluorophenylloxycarbonyl, p-toluenesulfonyloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl, methylthio(C<sub>1</sub>-C<sub>2</sub>)alkyl, methylsulfoxido(C<sub>1</sub>-C<sub>2</sub>)alkyl, methylsulfonyl(C<sub>1</sub>-C<sub>2</sub>)alkyl, or (C<sub>1</sub>-C<sub>3</sub>)trisubstituted-siloxy(C<sub>1</sub>-C<sub>3</sub>)alkyl (-CH<sub>2</sub>)<sub>n</sub>Si(OR<sup>4</sup>R<sup>5</sup>R<sup>6</sup>); wherein n=1-3, R<sup>4</sup> represents a straight or branched hydrocarbon chain of the indicated length, R<sup>5</sup>, R<sup>7</sup> represent H or straight or branched hydrocarbon chains of the indicated length,

R<sup>8</sup> represents (C<sub>1</sub>-C<sub>3</sub>)alkyl or aryl optionally substituted with halo or (C<sub>1</sub>-C<sub>3</sub>)alkyl, and R<sup>c</sup>, R<sup>d</sup>, R<sup>e</sup>, R<sup>f</sup>, and R<sup>g</sup> are independent of one another;

provided that

- i) when R<sup>9</sup> and R<sup>10</sup> are both H, or
- ii) when R<sup>5</sup> and R<sup>6</sup> do not together form a linkage of the type (-OCHR<sup>9</sup>CHR<sup>10</sup>O-),

then the number of carbon atoms, excluding those of cyano substitution, for either or both of groups R<sup>1</sup> or R<sup>2</sup> is greater than 4, and the number of carbon atoms, excluding those of cyano substitution, for the sum of groups R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> is 10, 11, or 12; and

when R<sup>5</sup> and R<sup>6</sup> together as a linkage of the type (-OCHR<sup>9</sup>CHR<sup>10</sup>O-) form a ring with the phenyl carbons to which they are attached, and R<sup>9</sup> and R<sup>10</sup> are not both H,

then R<sup>1</sup> and R<sup>2</sup> are methyl.

5. (original) The compound of claim 4 selected from the group consisting of:

- a) 3,5-Dimethyl-benzoic acid N-tert-butyl-N'-(3-hydroxymethyl-5-methyl-2,3-dihydro-benzo[1,4]dioxine-6-carbonyl)-hydrazide,
- b) 3,5-Dimethyl-benzoic acid N-tert-butyl-N'-[3-(tert-butyl-dimethyl-silanyloxymethyl)-5-methyl-2,3-dihydro-benzo[1,4]dioxine-6-carbonyl]-hydrazide,
- c) 7-[N'-tert-Butyl-N'-(3,5-dimethyl-benzoyl)-hydrazinocarbonyl]-8-methyl-2,3-dihydro-benzo[1,4]dioxine-2-carboxylic acid,
- d) 7-[N'-tert-Butyl-N'-(3,5-dimethyl-benzoyl)-hydrazinocarbonyl]-8-methyl-2,3-dihydro-benzo[1,4]dioxine-2-carboxylic acid methyl ester,
- e) 3,5-Dimethyl-benzoic acid N-tert-butyl-N'-(3-semicarbazidomethyl-5-methyl-2,3-dihydro-benzo[1,4]dioxine-6-carbonyl)-hydrazide,
- f) Phenyl-carbamic acid 7-[N'-tert-butyl-N'-(3,5-dimethyl-benzoyl)-hydrazinocarbonyl]-8-methyl-2,3-dihydro-benzo[1,4]dioxin-2-ylmethyl ester,
- g) 3,5-Dimethyl-benzoic acid N'-[3-(2-amino-ethyl)-5-methyl-2,3-dihydro-benzo[1,4]dioxine-6-carbonyl]-N-tert-butyl-hydrazide,

- h) 7-[N'-tert-Butyl-N'-(3,5-dimethyl-benzoyl)-hydrazinocarbonyl]-8-methyl-2,3-dihydro-benzo[1,4]dioxine-2-carboxylic acid pentafluorophenyl ester,
- i) 7-[N'-tert-Butyl-N'-(3,5-dimethyl-benzoyl)-hydrazinocarbonyl]-8-methyl-2,3-dihydro-benzo[1,4]dioxine-2-carboxylic acid methylamide,
- j) 3,5-Dimethyl-benzoic acid N-tert-butyl-N'-(3-formyl-5-methyl-2,3-dihydro-benzo[1,4]dioxine-6-carbonyl)-hydrazide,
- k) Toluene-4-sulfonic acid 7-[N'-tert-butyl-N'-(3,5-dimethyl-benzoyl)-hydrazinocarbonyl]-8-methyl-2,3-dihydro-benzo[1,4]dioxin-2-ylmethyl ester,
- l) 3,5-Dimethyl-benzoic acid N-tert-butyl-N'-[3-(hydroxyimino-methyl)-5-methyl-2,3-dihydro-benzo[1,4]dioxine-6-carbonyl]-hydrazide,
- m) 3,5-Dimethyl-benzoic acid N-tert-butyl-N'-(3-cyanomethyl-5-methyl-2,3-dihydro-benzo[1,4]dioxine-6-carbonyl)-hydrazide,
- n) 3,5-Dimethyl-benzoic acid N-tert-butyl-N'-(5-methyl-3-methylsulfanylmethyl-2,3-dihydro-benzo[1,4]dioxine-6-carbonyl)-hydrazide,
- o) 3,5-Dimethyl-benzoic acid N-tert-butyl-N'-(3-methanesulfonylmethyl-5-methyl-2,3-dihydro-benzo[1,4]dioxine-6-carbonyl)-hydrazide,
- p) 3,5-Dimethyl-benzoic acid N-tert-butyl-N'-(3-fluoromethyl-5-methyl-2,3-dihydro-benzo[1,4]dioxine-6-carbonyl)-hydrazide,
- q) 3,5-Dimethyl-benzoic acid N-(1-tert-butyl-heptyl)-N'-(3-methoxy-2-methyl-benzoyl)-hydrazide,
- r) 3,5-Dimethyl-benzoic acid N-(1-tert-butyl-heptyl)-N'-(4-ethyl-benzoyl)-hydrazide,
- s) 3,5-Dimethoxy-4-methyl-benzoic acid N-(1-tert-butyl-heptyl)-N'-(3-methoxy-2-methyl-benzoyl)-hydrazide,
- t) 3,5-Dimethoxy-4-methyl-benzoic acid N-(1-tert-butyl-heptyl)-N'-(4-ethyl-benzoyl)-hydrazide,
- u) 2-Methoxy-nicotinic acid N-(1-tert-butyl-heptyl)-N'-(4-ethyl-benzoyl)-hydrazide,
- v) 3,5-Dimethyl-benzoic acid N-(1-tert-butyl-3,4,4-trimethyl-pent-2-enyl)-N'-(3-methoxy-2-methyl-benzoyl)-hydrazide,

w) 3,5-Dimethyl-benzoic acid N-(1-tert-butyl-2-cyano-vinyl)-N'-(3-methoxy-2-methyl-benzoyl)-hydrazide,

x) 3,5-Dimethyl-benzoic acid N-(1-butyl-2,2-dimethyl-pentyl)-N'-(3-methoxy-2-methyl-benzoyl)-hydrazide, and

y) 3,5-Dimethyl-benzoic acid N-(1-butyl-2,2-dimethyl-pent-4-enyl)-N'-(3-methoxy-2-methyl-benzoyl)-hydrazide.

6. - 17. (Canceled)